SEQUENCE LISTING

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       LAFORET, MARIE-PIERRE
       LEVEZIEL, HUBERT

<120> USE OF SILVER GENE FOR THE AUTHENTICATION OF
       THE RACIAL ORIGIN OF ANIMAL POPULATIONS, AND
       OF THE DERIVATIVE PRODUCTS THEREOF

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<140> 10/565,646
<141> 2006-03-24

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Asn Ser Leu Ala Met Val Ser Thr Gln Leu Val Met Pro Gly Gln Glu
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Ala Gly Leu Arg Gln Ala Pro Leu Phe Val Gly Ile Leu Leu Val Leu
            580   585   590

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Gln Gly Ser Ala Val Pro Leu Pro Gln Leu Pro His Gly Arg Thr Gln
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Glu
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Ser Gln Gly Pro Asp Cys Trp Arg
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Ile Asn
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Gln Val Pro Phe Ser Val Ser Val Ser Gln Leu Gln Ala Leu Asp Gly
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Arg Asn Lys Arg Phe Leu Arg Lys Gln Pro Leu Thr Phe Ala Leu Gln
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ctc cat gat ccc agt ggc tat ttg gct ggg gct gac ctt tcc tac acc    4878
Leu His Asp Pro Ser Gly Tyr Leu Ala Gly Ala Asp Leu Ser Tyr Thr
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Trp Asp Phe Gly Asp Ser Ser Thr Gly Thr Leu Ile Ser Arg Ala Leu Thr
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Thr Glu Asp Val Gly Thr Thr Pro Glu Gln Val Ala Thr Ser Lys Val
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Leu Ser Thr Thr Pro Val Glu Met Pro Thr Ala Lys Ala Thr Gly Arg
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Thr Leu Val Leu Glu Lys Arg Gln Ala Pro Leu Asp Cys Val Leu Tyr
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Cys Gln Pro Val Pro Pro Ser Pro Ala Cys Gln Leu Val Leu His Gln
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Thr Ala Leu Leu Leu Ala Ser Leu Ile Tyr Arg
            595                 600

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   Arg Arg Leu Met Lys Gln Gly Ser Ala Val Pro Leu Pro Gln Leu
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635                 640               645

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Tyr Pro Glu Trp Thr Glu Ser Gln Gly Pro Asp Cys Trp Arg Gly Gly
        50                  55                  60

His Ile Ser Leu Lys Val Ser Asn Asp Gly Thr Leu Ile Gly Ala
65                  70                  75                  80

Asn Ala Ser Phe Ser Ile Ala Leu His Phe Pro Lys Ser Gln Lys Val
                85                  90                  95

Leu Pro Asp Gly Gln Val Ile Trp Ala Asn Asn Thr Ile Ile Asn Gly
            100                 105                 110

Ser Gln Val Trp Gly Gly Gln Leu Val Tyr Pro Gln Glu Pro Asp Asp
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Thr Cys Ile Phe Pro Asp Gly Glu Pro Cys Pro Ser Gly Pro Leu Ser
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Gln Lys Arg Cys Phe Val Tyr Val Trp Lys Thr Trp Asp Gln Tyr Trp
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Ala Met Leu Gly Thr Tyr Asn Met Glu Val Thr Val Tyr His Arg Arg
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Gly Ser Gln Ser Tyr Val Pro Leu Ala His Ser Ser Ser Ala Phe Thr
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Ile Thr Asp Gln Val Pro Phe Ser Val Ser Val Ser Gln Leu Gln Ala
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Leu Asp Gly Arg Asn Lys Arg Phe Leu Arg Lys Gln Pro Leu Thr Phe
225                 230                 235                 240

Ala Leu Gln Leu His Asp Pro Ser Gly Tyr Leu Ala Gly Ala Asp Leu
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Ser Tyr Thr Trp Asp Phe Gly Asp Ser Thr Gly Thr Leu Ile Ser Arg
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Ser Ala Glu Ile Leu Gln Ala Val Ser Ser Glu Gly Asp Ala Phe
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Glu Leu Thr Val Ser Cys Gln Gly Gly Leu Pro Lys Glu Ala Cys Met
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Asp Ile Ser Ser Pro Gly Cys Gln Leu Pro Ala Gln Arg Leu Cys Gln
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Pro Val Pro Pro Ser Pro Ala Cys Gln Leu Val Leu His Gln Val Leu
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Gln Gly Ser Ala Val Pro Leu Pro Gln Leu Pro His Gly Arg Thr Gln
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Leu Leu His Val Ala Leu Met Gly Val Leu Ala Val Gly Thr Thr Glu
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Pro Asp Cys Trp Arg
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Ser Leu Lys Val Ser Asn Asp Gly Pro Thr Leu Ile Gly Ala Asn Ala
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Cys Phe Val Tyr Val Trp Lys Thr Trp
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Gln Tyr Trp Gln Val Leu Gly Gly Pro Val Ser Gly Leu Ser Ile Gly
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aca gac aag gca atg ctg ggc aca tat aac atg gaa gtg act gtc tac     4409
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His Arg Arg Gly Ser Gln Ser Tyr Val Pro Leu Ala His Ser Ser Ser
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Ala Phe Thr Ile Thr
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Val Ser Val Ser Gln Leu Gln Ala Leu Asp Gly Arg Asn Lys Arg Phe
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Leu Arg Lys Gln Pro Leu Thr Phe Ala Leu Gln Leu His Asp Pro Ser
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ggc tat ttg gct ggg gct gac ctt tcc tac acc tgg gac ttt ggt gac     4890
Gly Tyr Leu Ala Gly Ala Asp Leu Ser Tyr Thr Trp Asp Phe Gly Asp
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Ser Thr Gly Thr Leu Ile Ser Arg Ala Leu Thr Val Thr His Thr Tyr
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His Val Thr Thr Ala Glu Ala Pro Gly Thr Thr Ala Gly Gln Val Pro
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Thr Thr Glu Val Met Gly Thr Thr Pro Gly Gln Val Pro Thr Ala Glu
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Gly Ser Leu Ser Pro Leu Pro Asp Asp Thr Ala Thr Leu Val Leu Glu
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Lys Arg Gln Ala Pro Leu Asp Cys Val Leu Tyr Arg Tyr Gly Ser Phe
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Ser Leu Thr Leu Asp Ile Val
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Ile Leu Gln Ala Val Ser Ser Ser Glu Gly Asp Ala Phe Glu Leu Thr
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Ser Pro Gly Cys Gln Leu Pro Ala Gln Arg Leu Cys Gln Pro Val Pro
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Pro Ser Pro Ala Cys Gln Leu Val Leu His Gln Val Leu Lys Gly Gly
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Ser Leu Ile Tyr Arg
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Leu Pro His Gly Arg Thr Gln Trp Leu Arg Leu Pro Trp Val Phe Arg
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Ser Cys Pro Ile Gly Glu Ser Lys Pro Leu Leu Ser Gly Gln Gln Val
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Pro Glu Trp Thr Glu Ser Gln Gly Pro Asp Cys Trp Arg Gly Gly His
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Ile Ser Leu Lys Val Ser Asn Asp Gly Pro Thr Leu Ile Gly Ala Asn
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Ala Ser Phe Ser Ile Ala Leu His Phe Pro Lys Ser Gln Lys Val Leu
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Pro Asp Gly Gln Val Ile Trp Ala Asn Asn Thr Ile Ile Asn Gly Ser
            100   105   110

Gln Val Trp Gly Gly Gln Leu Val Tyr Pro Gln Glu Pro Asp Asp Thr
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Cys Ile Phe Pro Asp Gly Glu Pro Cys Pro Ser Gly Pro Leu Ser Gln
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Lys Arg Cys Phe Val Tyr Val Trp Lys Thr Trp Asp Gln Tyr Trp Gln
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Val Leu Gly Gly Pro Val Ser Gly Leu Ser Ile Gly Thr Asp Lys Ala
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Met Leu Gly Thr Tyr Asn Met Glu Val Thr Val Tyr His Arg Arg Gly
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Ser Gln Ser Ser Tyr Val Pro Leu Ala His Ser Ser Ser Ala Phe Thr Ile
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Thr Asp Gln Val Pro Phe Ser Val Ser Val Ser Gln Leu Gln Ala Leu
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Asp Gly Arg Asn Lys Arg Phe Leu Arg Lys Gln Pro Leu Thr Phe Ala
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Leu Gln Leu His Asp Pro Ser Gly Tyr Leu Ala Gly Ala Asp Leu Ser
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Tyr Thr Trp Asp Phe Gly Asp Ser Thr Gly Thr Leu Ile Ser Arg Ala
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Leu Thr Val Thr His Thr Tyr Leu Glu Ser Gly Pro Val Thr Ala Gln
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Lys Val Leu Ser Thr Thr Pro Val Glu Met Pro Thr Ala Lys Ala Thr
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Ala Glu Ile Leu Gln Ala Val Ser Ser Ser Gly Gly Asp Ala Phe Glu
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Ser Leu Ala Met Val Ser Thr Gln Leu Val Met Pro Gly Gln Glu Ala
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Gly Leu Arg Gln Ala Pro Leu Phe Val Gly Ile Leu Leu Val Leu Thr
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Ala Leu Leu Leu Ala Ser Leu Ile Tyr Arg Arg Arg Leu Met Lys Gln
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Gly Ser Ala Val Pro Leu Pro Gln Leu Pro His Gly Arg Thr Gln Trp
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His Ile Ser Leu Lys Val Ser Asn Asp Gly Pro Thr Leu Ile Gly Ala
65                  70                  75                  80

Asn Ala Ser Phe Ser Ile Ala Leu His Phe Pro Lys Ser Gln Lys Val
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Leu Gly Val Ser Arg Gln Leu Arg Ile Lys Ala Trp Asn Arg Gln Leu
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Tyr Pro Glu Trp Thr Glu Ser Gln Gly Pro Asp Cys Trp Arg Gly Gly
        50                  55                  60


His Ile Ser Leu Lys Val Ser Asn Asp Gly Pro Thr Leu Ile Gly Ala
65                  70                  75                  80


Asn Ala Ser Phe Ser Ile Ala Leu His Phe Pro Lys Ser Gln Lys Val
                85                  90                  95


Leu Pro Asp Gly Gln Val Ile Trp Ala Asn Asn Thr Ile Ile Asn Gly
                100                 105                 110


Ser Gln Val Trp Gly Gly Gln Leu Val Tyr Pro Gln Glu Pro Asp Asp
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Thr Cys Ile Phe Pro Asp Gly Glu Pro Cys Pro Ser Gly Pro Leu Ser
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Gln Lys Arg Cys Phe Val Tyr Val Trp Lys Thr Trp Asp Gln Tyr Trp
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Gln Val Leu Gly Gly Pro Val Ser Gly Leu Ser Ile Gly Thr Asp Lys
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Ala Met Leu Gly Thr Tyr Asn Met Glu Thr Val Tyr His Arg Arg
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Gly Ser Gln Ser Tyr Val Pro Leu Ala His Ser Ser Ser Ala Phe Thr
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Ile Thr Asp Gln Val Pro Phe Ser Val Ser Val Ser Gln Leu Gln Ala
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Leu Asp Gly Arg Asn Lys Arg Phe Leu Arg Lys Gln Pro Leu Thr Phe
225   230   235   240

Ala Leu Gln Leu His Asp Pro Ser Gly Tyr Leu Ala Gly Ala Asp Leu
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Ser Tyr Thr Trp Asp Phe Gly Asp Ser Thr Gly Thr Leu Ile Ser Arg
    260   265   270

Ala Leu Thr Val Thr His Thr Tyr Leu Glu Ser Gly Pro Val Thr Ala
    275   280   285

Gln Val Val Leu Gln Ala Ala Ile Pro Leu Thr Ser Cys Gly Ser Ser
    290   295   300

Pro Val Pro Gly Thr Thr Asp Arg His Val Thr Thr Ala Glu Ala Pro
305   310   315   320

Gly Thr Thr Ala Gly Gln Val Pro Thr Thr Glu Val Met Gly Thr Thr
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Pro Gly Gln Val Pro Thr Ala Glu Ala Pro Gly Thr Thr Val Gly Trp
            340   345   350

Val Pro Thr Thr Glu Asp Val Gly Thr Thr Pro Glu Gln Val Ala Thr
            355   360   365

Ser Lys Val Leu Ser Thr Thr Pro Val Glu Met Pro Thr Ala Lys Ala
    370   375   380

Thr Gly Arg Thr Pro Glu Val Ser Thr Thr Glu Pro Ser Gly Thr Thr
385   390   395   400

Val Thr Gln Gly Thr Thr Pro Glu Leu Val Glu Thr Thr Ala Gly Glu
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Val Ser Thr Pro Glu Pro Ala Gly Ser Asn Thr Ser Ser Phe Met Pro
                420   425   430

Thr Glu Gly Thr Ala Gly Ser Leu Ser Pro Leu Pro Asp Asp Thr Ala
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Thr Leu Val Leu Glu Lys Arg Gln Ala Pro Leu Asp Cys Val Leu Tyr
        450   455   460

Arg Tyr Gly Ser Phe Ser Leu Thr Leu Asp Ile Val Gln Gly Ile Glu
465   470   475   480

Ser Ala Glu Ile Leu Gln Ala Val Ser Ser Glu Gly Asp Ala Phe
                485   490   495

Glu Leu Thr Val Ser Cys Gln Gly Gly Leu Pro Lys Glu Ala Cys Met
                500   505   510

Asp Ile Ser Ser Pro Gly Cys Gln Leu Pro Ala Gln Arg Leu Cys Gln
        515   520   525

Pro Val Pro Pro Ser Pro Ala Cys Gln Leu Val Leu His Gln Val Leu
        530   535   540

Lys Gly Gly Ser Gly Thr Tyr Cys Leu Asn Val Ser Leu Ala Asp Ala
545   550   555   560

Asn Ser Leu Ala Met Val Ser Thr Gln Leu Val Met Pro Gly Gln Glu
                565   570   575

Ala Gly Leu Arg Gln Ala Pro Leu Phe Val Gly Ile Leu Leu Val Leu
                580   585   590

Thr Ala Leu Leu Leu Ala Ser Leu Ile Tyr Arg Arg Arg Leu Met Lys
        595   600   605

Gln Gly Ser Ala Val Pro Leu Pro Gln Leu Pro His Gly Arg Thr Gln
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Trp Leu Arg Leu Pro Trp Val Phe Arg Ser Cys Pro Ile Gly Glu Ser
                        Page 35

Lys Pro Leu Leu Ser Gly Gln Gln Val
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Thr Asp Lys Ala Met Leu Gly Thr Tyr Asn Met Glu Val Thr Val Tyr
              20   25   30

His Arg Arg Gly Ser Gln Ser Tyr Val Pro Leu Ala His Ser Ser Ser
            35   40   45

Ala Phe Thr Ile Thr Asp Gln Val Pro Phe Ser Val Ser Val Ser Gln
      50   55   60

Leu Gln Ala Leu Asp Gly Arg Asn Lys Arg Phe Leu Arg Lys Gln Pro
65   70   75   80

Leu Thr Phe Ala Leu Gln Leu His Asp Pro Ser Gly Tyr Leu Ala Gly
                85   90   95

Ala Asp Leu Ser Tyr Thr Trp Asp Phe Gly Asp Ser Thr Gly Thr Leu
              100   105   110

Ile Ser Arg Ala Leu Thr Val Thr His Thr Tyr Leu Glu Ser Gly Pro
            115   120   125

Val Thr Ala Gln Val Val Leu Gln Ala Ala Ile Pro Leu Thr Ser Cys
      130   135   140

Gly Ser Ser Pro Val Pro Gly Thr Thr Asp Arg His Val Thr Thr Ala
145   150   155   160

Glu Ala Pro Gly Thr Thr Ala Gly Gln Val Pro Thr Thr Glu Val Met
                165   170   175

Gly Thr Thr Pro Gly Gln Val Pro Thr Ala Glu Ala Pro Gly Thr Thr
              180   185   190

Val Gly Trp Val Pro Thr Thr Glu Asp Val Gly Thr Thr Pro Glu Gln
                          Page 36

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            195                    200        205
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Val Ala Thr Ser Lys Val Leu Ser Thr Thr Pro Val Glu Met Pro Thr
    210   215   220

Ala Lys Ala Thr Gly Arg Thr Pro Glu Val Ser Thr Thr Glu Pro Ser
225   230   235   240

Gly Thr Thr Val Thr Gln Gly Thr Thr Pro Glu Leu Val Glu Thr Thr
                   245   250   255

Ala Gly Glu Val Ser Thr Pro Glu Pro Ala Gly Ser Asn Thr Ser Ser
                   260   265   270

Phe Met Pro Thr Glu Gly Thr Ala Gly Ser Leu Ser Pro Leu Pro Asp
                   275   280   285

Asp Thr Ala Thr Leu Val Leu Glu Lys Arg Gln Ala Pro Leu Asp Cys
    290   295   300

Val Leu Tyr Arg Tyr Gly Ser Phe Ser Leu Thr Leu Asp Ile Val Ser
305   310   315   320

Ile Glu Ser Ala Glu Ile Leu Gln Ala Val Ser Ser Ser Glu Gly Asp
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Ala Phe Glu Leu Thr Val Ser Cys Gln Gly Gly Leu Pro Lys Glu Ala
                   340   345   350

Cys Met Asp Ile Ser Ser Pro Gly Cys Gln Leu Pro Ala Gln Arg Leu
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Cys Gln Pro Val Pro Pro Ser Pro Ala Cys Gln Leu Val Leu His Gln
    370   375   380

Val Leu Lys Gly Gly Ser Gly Thr Tyr Cys Leu Asn Val Ser Leu Ala
385   390   395   400

Asp Ala Asn Ser Leu Ala Met Val Ser Thr Gln Leu Val Met Pro Gly
                   405   410   415

Gln Glu Ala Gly Leu Arg Gln Ala Pro Leu Phe Val Gly Ile Leu Leu
                   420   425   430

Val Leu Thr Ala Leu Leu Leu Ala Ser Leu Ile Tyr Arg Arg Arg Leu
                   435   440   445

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Met Lys Gln Gly Ser Ala Val Pro Leu Pro Gln Leu Pro His Gly Arg
    450                 455                 460

Thr Gln Trp Leu Arg Leu Pro Trp Val Phe Arg Ser Cys Pro Ile Gly
465                 470                 475                 480

Glu Ser Lys Pro Leu Leu Ser Gly Gln Gln Val
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